

## CLAIM AMENDMENTS

1. (canceled)

2. (currently amended) The method according to claim 13  
~~, characterized in that wherein~~ after cutting the strip sample  
[[(1a)]] from the oncoming continuous rolled strip, the new strip  
leading end is deflected downwardly below the inspection table  
[[(11)]] and wound on an upper coiling mandrel [[(20)]] or a lower  
coiling mandrel ~~(21) of the coiling station (18)~~ lying below the  
plane of the inspection table [[(1)]].

3. (currently amended) The method according to claim 2,  
~~characterized in that wherein~~ the strip samples [[(1a)]] are braked  
arrested on the inspection table [[(11)]] by a belt conveyor  
[[(17)]] integrated in the inspection table [[(11)]].

4. (currently amended) The method according to claim 2  
wherein 1, ~~characterized that~~ a [[wound]] coil [[(25)]] wound upon  
the upper coiling mandrel [[(20)]] is swung through 180° during the  
continuous rolling operation and is finish wound to a predetermined  
maximum coil diameter [[(25a)]].

1               5. (currently amended) The method according to claim 2  
2 ~~wherein 1 characterized in that a [[wound]] coil [[25]] wound~~  
3   [[up]] on the lower coiling mandrel [[21]] is lowered and carried  
4 off parallel to [[the]] a coiling mandrel axis.

6. (canceled)

1               7. (currently amended) The apparatus according to claim  
2 ~~6 characterized in that 14, further comprising at [[the]] an inlet~~  
3 ~~[[((27))]] to the coiling station coiler 18 a deflection unit (10) is~~  
4 ~~provided for deflecting the metal strip (1) to at least one coiling~~  
5 ~~mandrel [[(20; 21)]].~~

1               8. (currently amended) The apparatus according to claim  
2 ~~6, characterized in that 14 wherein the coiling station 18 is~~  
3 ~~constructed of a respective coiler has an upper coiling mandrel~~  
4 ~~[[((20))]] mandrel and lower coiling mandrel [[((21))]] arranged~~  
5 ~~eccentrically within a rotating frame [[((28))]] below the plane of~~  
6 ~~the inspection table [[((11))]].~~

1               9. (currently amended) The apparatus according to claim  
2 ~~8 characterized in that wherein the upper coil mandrel [[((20))]] and~~  
3 ~~the lower coil mandrel [[((21))]] lie on a diameter through the~~  
4 ~~control a rotation axis [[((28a))]] of the rotating frame [[((28))]].~~

1               10. (currently amended) The apparatus according to  
2 claim 7 characterized in that 9 wherein the diameter runs at an  
3 angle to the horizontal of about 15° to 25°.

1               11. (currently amended) The apparatus according to  
2 claim 6 characterized in that 8 wherein the rotating frame [[(28)]]  
3 for the coiling mandrels [[(20; 21)]] is journaled for rotation on  
4 rotatably driven support rollers [[(2a)]].

1               12. (currently amended) The apparatus according to  
2 claim 6 characterized in that 8 wherein the lower coiling mandrel  
3 [[(21)]] has juxtaposed with it a pressing roller arm [[(30)]]  
4 swingable in and out and provided with a pressing roller [[(31)]].

1               13. (new) A method of producing, coiling, and  
2 inspecting steel strip in a mill where the strip issues  
3 continuously in a travel direction from a downstream end of a  
4 rolling line and can be wound up there on a coiler, the method  
5 comprising the steps of:

6               providing an inspection table downstream of the rolling  
7 line with a planar support surface of the table aligned with the  
8 downstream end of the rolling line and the strip emerging  
9 therefrom;

10             orienting the coiler below a plane of the table support  
11 surface;

12                   during normal rolling deflecting the strip downward to  
13       the coiler and reeling the strip up on the coiler; and  
14       for inspection of the strip  
15                   transversely cutting the strip to produce a new  
16                   leading end,  
17                   feeding the strip starting at the new leading end  
18                   toward the table without substantial  
19                   deflection,  
20                   transversely cutting the strip upstream of the new  
21                   leading end to form a strip sample separate  
22                   from the strip emerging from the rolling line  
23                   conducting the strip sample to the table and  
24                   arresting and inspecting the strip sample on  
25                   the table surface while deflecting the strip  
26                   emerging from the line back down to the coiler  
27                   to continue coiling it up.

1                  14. (new) An apparatus for producing, coiling, and  
2       inspecting steel strip in a mill where the strip issues  
3       continuously in a travel direction from a downstream end of a  
4       rolling line and can be wound up there on a coiler, the apparatus  
5       comprising:

6                  an inspection table downstream of the rolling line with a  
7       planar support surface of the table aligned with the downstream end  
8       of the rolling line and the strip emerging therefrom, the coiler  
9       being oriented below a plane of the table support surface;

10               means for transversely cutting the strip upstream of the  
11       coiler and downstream of the downstream end of the rolling line;  
12               means connected to the coiler and to the cutting means  
13       for  
14               for normal rolling deflecting the strip downward to the  
15       coiler and reeling the strip up on the coiler; and  
16               for inspection of the strip  
17               transversely cutting the strip to produce a new  
18       leading end,  
19               feeding the strip starting at the new leading end  
20       toward the table without substantial  
21       deflection,  
22               transversely cutting the strip upstream of the new  
23       leading end to form a strip sample separate  
24       from the strip emerging from the rolling line  
25       conducting the strip sample to the table and  
26       arresting and inspecting the strip sample on  
27       the table surface while deflecting the strip  
28       emerging from the line back down to the coiler  
29       to continue coiling it up.

Remarks:

This amendment is submitted in an earnest effort to advance this case to issue without delay.

The specification has been amended to eliminate some minor obvious errors. No new matter whatsoever has been added.

The claims have been amended to overcome the formal objections largely resulting from the fact that they were translated from European practice. In addition the main method and apparatus claims have been completely replaced with US-style claims specifically drafted to overcome the formal and art rejections.

As amended, both the method and apparatus claims recite a system where the strip issuing from the downstream end of a rolling line is normally deflected somewhat downward to a coiler where it is wound up. In addition an inspection table has a planar support surface that is aligned with the downstream end of the rolling line, although during normal operation the strip is actually deflected downward to the coiler. To inspect the strip, it is cut transversely upstream of the coiler to create a new strip end, and the strip is then briefly not deflected, but instead is fed straight out to the inspection table. This is particularly convenient since the strip is in fact planar and flat as it issues from the rolling line. Once a sufficiently big strip sample has

been fed out onto the table, the strip is again cut and is again deflected downward for continued coiling. While the strip is being coiled, the sample cut out of it can be inspected.

With this system, therefore, strip production can remain continuous. Since as described in the dependent claims, the coiler has two separate winding mandrels, it is a simple matter to cut out the sample during changeover from one mandrel to the other, and in fact such sampling allows the changeover from one mandrel to the other to take place without stopping the mill at all. Thus it is in theory possible to take a sample for each coil that is produced so that upstream adjustments can be made when the inspection determines that the strip is tending to an out-of-range dimension, for instance.

This is in sharp distinction to the systems of the two cited references, namely US 4,296,623 of Elbe and US 6,502,445 of Drigani.

In Elbe there would appear to be a coplanar rolling line and inspection table, but there is nothing like the downward deflection of the strip for coiling. To test the strip, Elbe moves coils around, so that it is necessary to unwind a coil, flatten out part of it, cut it off, and so on. This clearly bears no resemblance to the elegant solution now defined in claims 13 and 14 of the instant invention. Clearly Elbe all alone cannot form a rejection of the amended claims.

In Drigani there is a dual-mandrel coiler, but nothing resembling the inspection system of this invention. Thus Drigani and Elbe together cannot form a valid §103 rejection of the amended claims.

For these reasons the claims in the case are clearly in condition for allowance and passage to issue. Notice to that effect is earnestly solicited.

If only minor problems that could be corrected by means of a telephone conference stand in the way of allowance of this case, the examiner is invited to call the undersigned to make the necessary corrections.

Respectfully submitted,  
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Enclosure:      Corrected version  
                  Substitute Specification  
                  Substitute Abstract